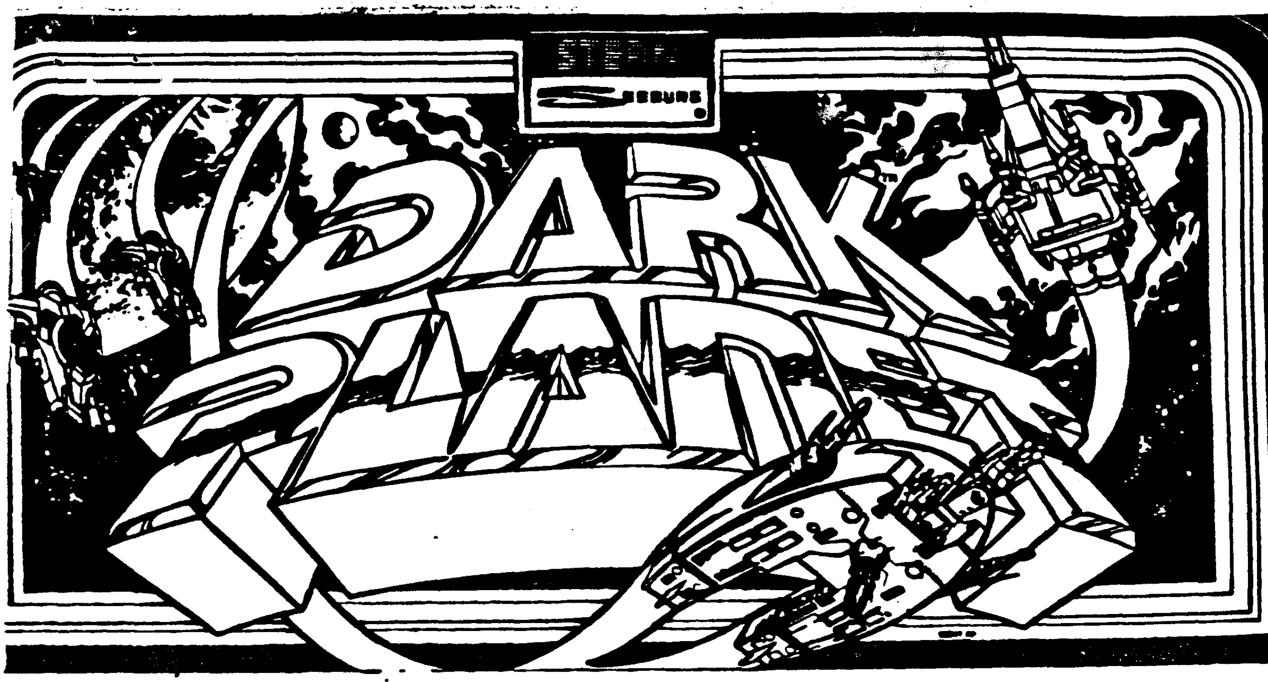


INSTALLATION & OPERATION

STERN® ELECTRONICS, INC.
700 Chase Avenue
Elk Grove Village, IL 60007
312/981-9600

The object of the game is to get all three bases burning at once, and keep them burning.

When the game first starts you will see two fighters and trak laying jeeps appearing from a bunker below you. Destroy fighters and jeeps from above by using the laser button (which destroys everything below it). The trak-laying jeeps are trying to build a loop of trak so the laser train (which destroys everything above it), has maximum mobility.

When the laser train appears, a protective fighter appears with it. You must destroy this fighter with your laser from above, before dropping down to the lower level to battle with the laser train. After destroying all the jeeps and the laser train on a loop you can then attack the bunker on that loop and set it on fire.

To move back and forth between levels you must go up or down the transport tube.

Occasionally fighters will come up the transport tube to the upper level to attack you if you stay on the upper level too long without dropping down to the lower level. Also, two enemy guns located in the cliffs of the upper level start to shoot if you stay on the upper level too long.

Randomly the volcano will start to erupt and start to cover the screen in blue. You must shoot the volcano with your missles to stop the eruption. (You must be on the upper level to shoot the volcano). If the eruption covers the screen, you will be destroyed.

When attackers are below you, use the laser button to destroy them. When attackers are on the same level as your ship, use the missle button to destroy them.

Laser train has no defenses on lower level, but will destroy everything above it.

Each loop is worth 24,200 points each.

Each loop contains:

- 12 - jeeps worth 100 points each.
- 3 - fighters worth 1,000 points each.
- 1 - laser train woth 10,000 points each.
- 1 - bunker worth 10,000 points each.
- 50,000 point bonus if you have all three bunkers on fire at the same time.

MIRROR MAINTENANCE

REFER TO ILLUSTRATIONS FOR MIRROR IDENTIFICATION

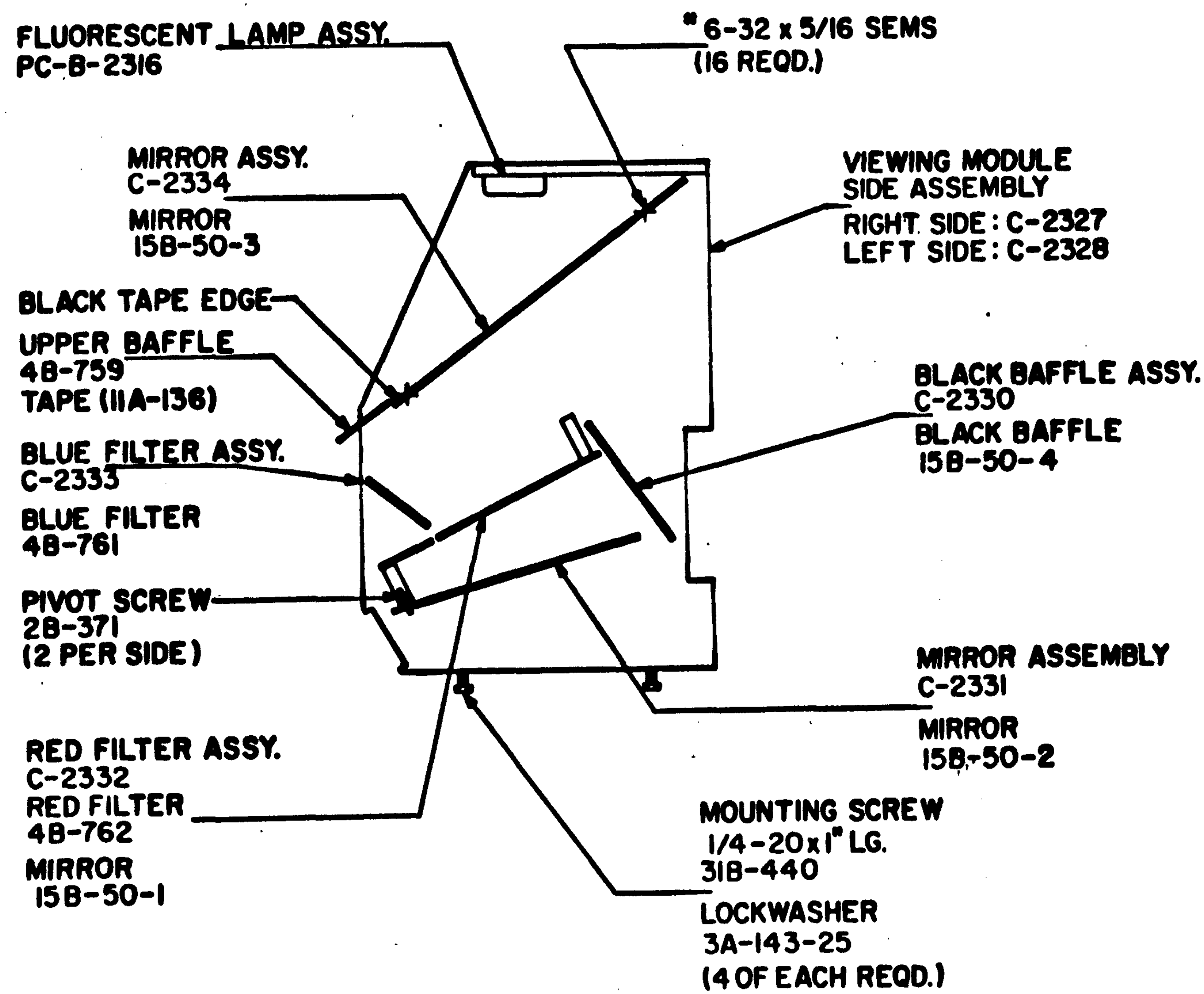
Mirror and color filters should be dusted periodically to prevent dust and dirt build-up on the mirrors and filters, which will affect their performance.

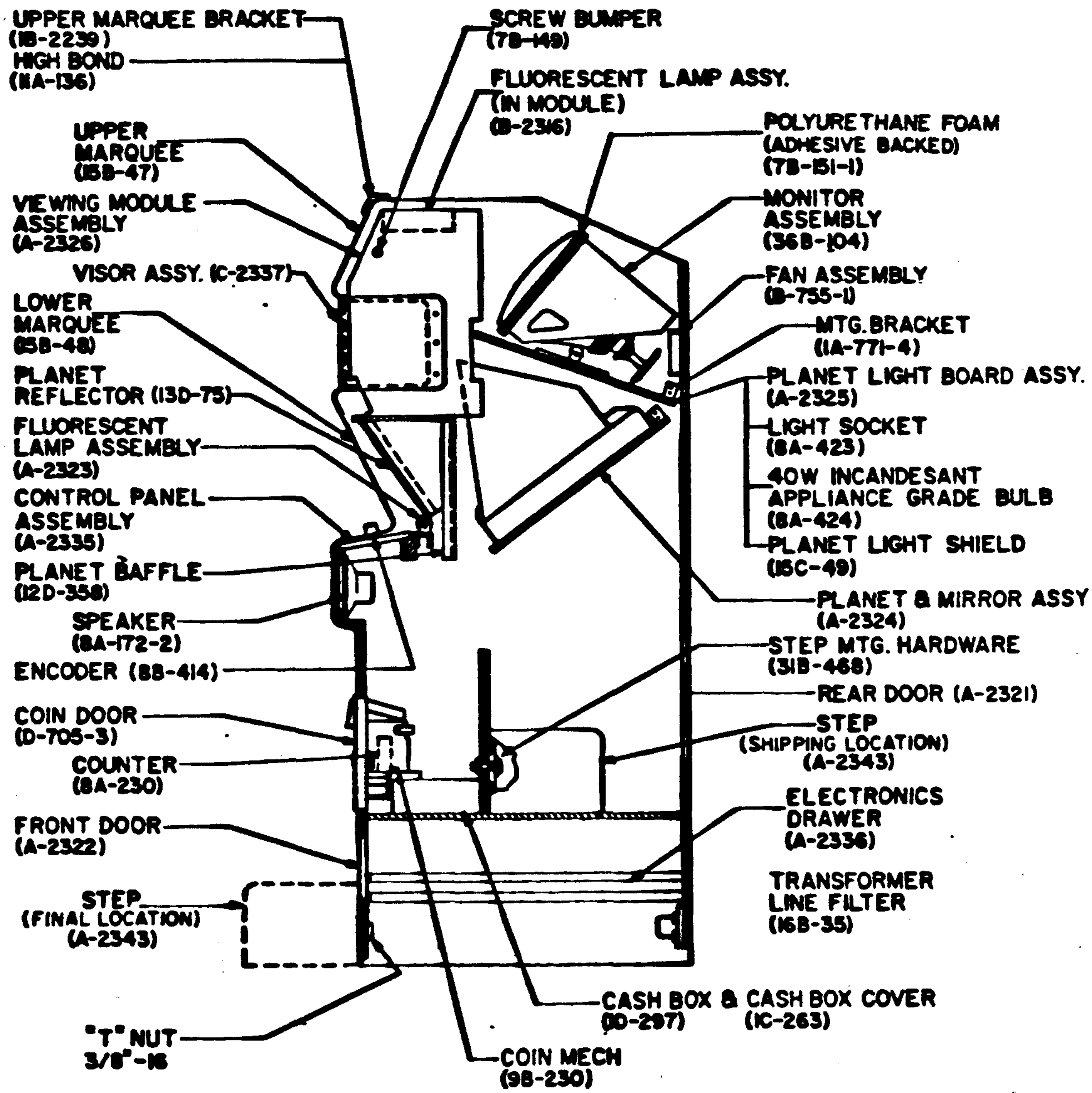
A soft cotton rag or a camel hair brush should be used to dust the mirrors and filters periodically.

If a mirror or filter needs cleaning, only a silicon based cleaner with a spray head, such as STERN ELECTRONICS MIRROR CLEANER (part #26A-36) should be used. No alkaline, acidic, or ammonia type cleaners (such as Windex (TM) or Fantastic (TM)) should be used. Only a soft cheesecloth or cotton rag should be used to clean the mirrors or filters.

CAUTION: At no time should anything abrasive be used on the mirrors or color filters.

VIEWING MODULE




UPPER MARQUEE BRACKET (1B-2239)
HIGH BOND (1IA-136)
SCREW BUMPER (7B-149)
FLUORESCENT LAMP ASSY. (IN MODULE) (1B-2316)
UPPER MARQUEE (15B-47)
POLYURETHANE FOAM (ADHESIVE BACKED) (7B-151-1)
VIEWING MODULE ASSEMBLY (A-2326)
MONITOR ASSEMBLY (36B-104)
VISOR ASSY. (C-2337)
FAN ASSEMBLY (1B-755-1)
LOWER MARQUEE (15B-48)
MTG. BRACKET (1A-771-4)
PLANET REFLECTOR (13D-75)
PLANET LIGHT BOARD ASSY. (A-2325)
FLUORESCENT LAMP ASSEMBLY (A-2323)
LIGHT SOCKET (8A-423)
40W INCANDESANT APPLIANCE GRADE BULB (8A-424)
CONTROL PANEL ASSEMBLY (A-2335)
PLANET LIGHT SHIELD (15C-49)
PLANET BAFFLE (12D-358)
PLANET & MIRROR ASSY (A-2324)
SPEAKER (8A-172-2)
STEP MTG. HARDWARE (31B-468)
ENCODER (8B-414)
REAR DOOR (A-2321)
COIN DOOR (D-705-3)
STEP (SHIPPING LOCATION) (A-2343)
COUNTER (8A-230)
ELECTRONICS DRAWER (A-2336)
FRONT DOOR (A-2322)
TRANSFORMER LINE FILTER (16B-35)
STEP (FINAL LOCATION) (A-2343)
CASH BOX & CASH BOX COVER (10D-297) (1C-263)
"T" NUT 3/8"-16
COIN MECH (9B-230)

IMPORTANT:

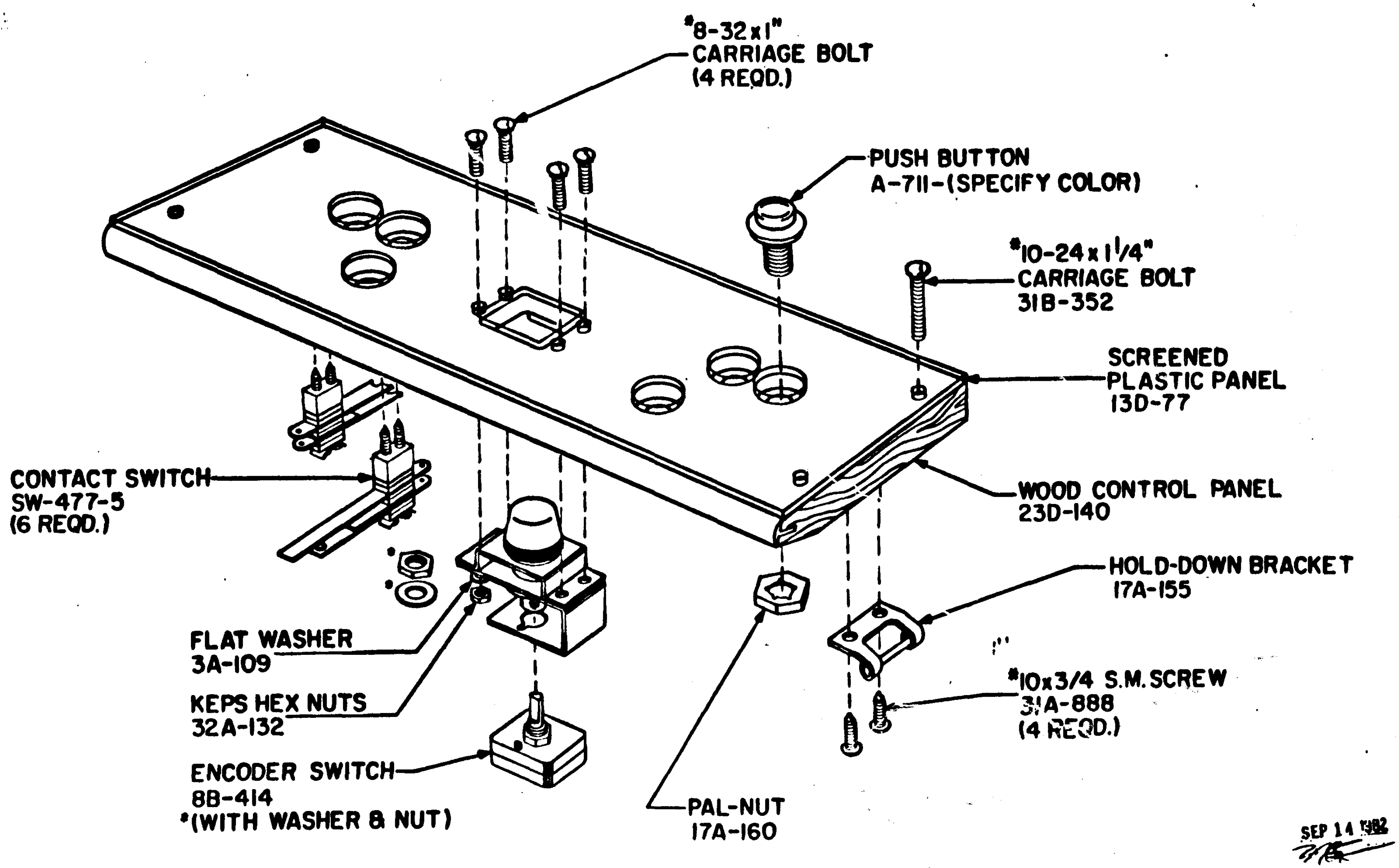
REPLACE WITH 40 WATT
APPLIANCE BULBS ONLY.
(GE* 40A15-22)
(SYLVANIA* 40A15)

CLEAN YELLOW GLASS
PERIODICALLY.

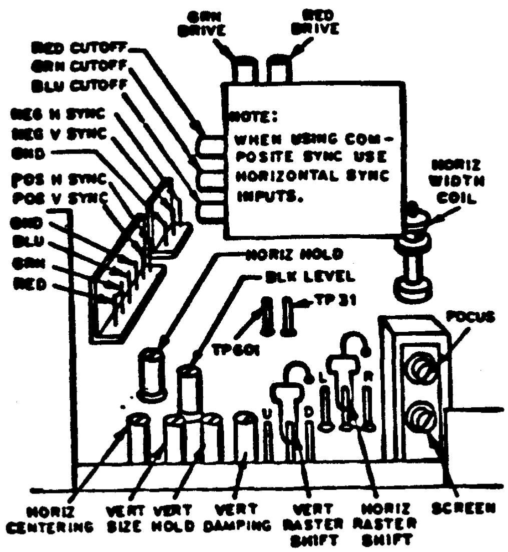
MIRRORS IN OPTICS
MODULE ARE 1ST SURFACE,
I.E. HAVE COATINGS ON THE
SURFACE OF THE GLASS.
CLEAN WITH A SOFT COTTON
RAG AND DON'T SCRATCH.

NOTE: USE ONLY A DRY RAG,
(NO GLASS CLEANER) FOR
THE LARGE MONITOR MIRROR.

PART NO. 128-485



#8-32 x 1" CARRIAGE BOLT (4 REQD.)
PUSH BUTTON A-711-(SPECIFY COLOR)
#10-24 x 1 1/4" CARRIAGE BOLT 31B-352
SCREENED PLASTIC PANEL 13D-77
WOOD CONTROL PANEL 23D-140
HOLD-DOWN BRACKET 17A-155
#10x3/4 S.M. SCREW 31A-888 (4 REQD.)
CONTACT SWITCH SW-477-5 (6 REQD.)
FLAT WASHER 3A-109
KEPS HEX NUTS 32A-132
ENCODER SWITCH 8B-414
*(WITH WASHER & NUT)
PAL-NUT 17A-160
SEP 14 1982



K4901 K4952
K4902 K4956
K4906 K4956R
K4911 K4961
K4951

1. HORIZONTAL FREQUENCY

With the monitor being driven from the game signal, connect a jumper between TP601 and TP31. Adjust the horizontal hold control until picture stops sliding horizontally, remove jumper. Do not use the horizontal hold control for horizontal centering. (See #3) NOTE: When game sync is composite, use horizontal sync input.

2. PICTURE SIZE

Adjust the vertical size control, and the horizontal width coil for desired picture size.

3. PICTURE CENTERING

If the video is off center vertically, move the vert raster position adjustment to the up or down position. If the video is off center horizontally, adjust the horizontal video position control to center the picture. If any additional horizontal positioning is required, move horizontal raster position adjustment to the left or right position.

4. VERTICAL DAMPING

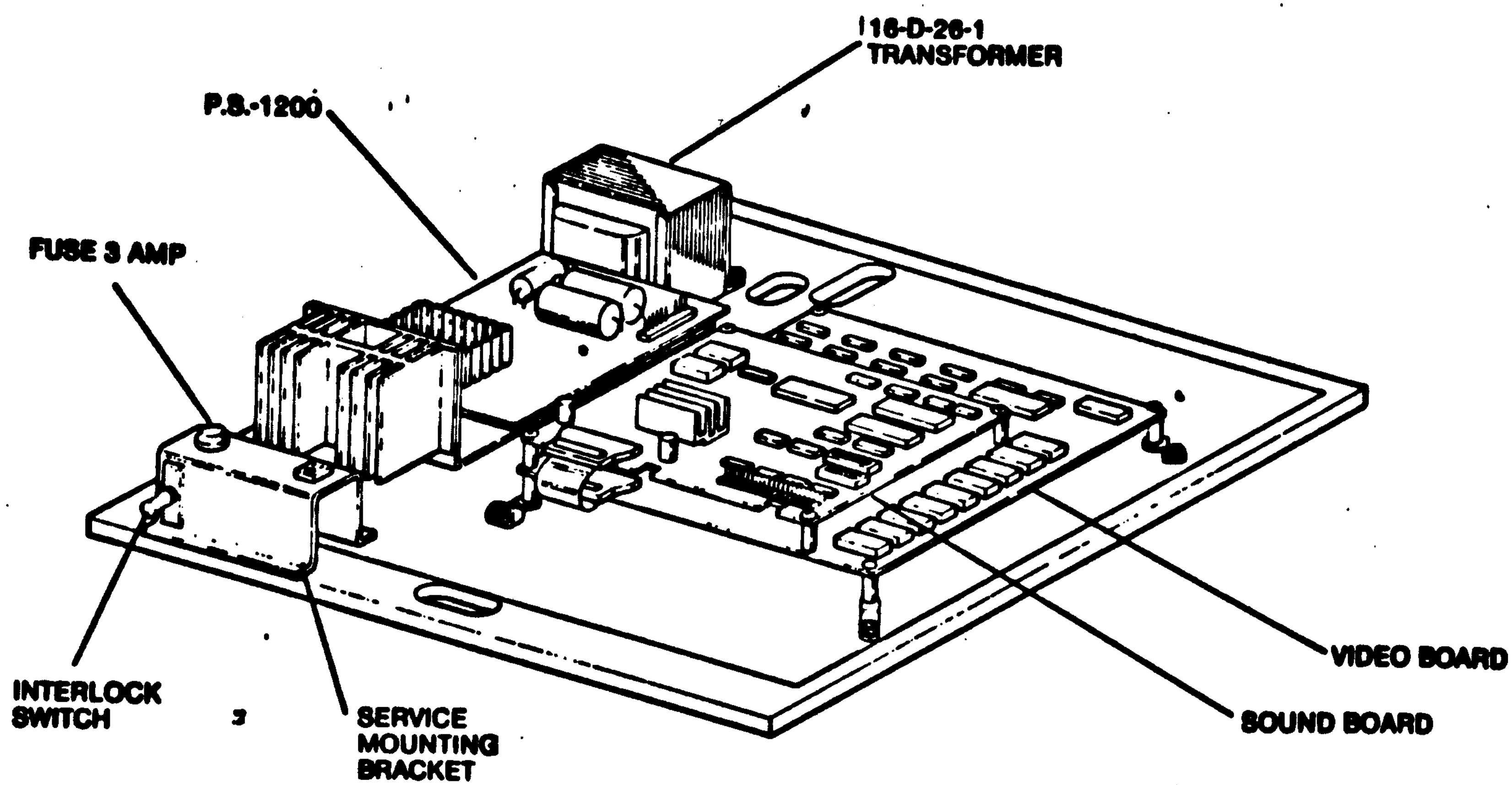
Adjustment of this control is required only if the monitor is being used with a game in which the top several raster lines are visible on the screen. Adjust the vertical damping control for uniform spacing of the top raster lines.

5. BLACK LEVEL

Adjust the black level control to obtain the proper black level (the black portion of the picture just extinguished). Do not use the screen control to set the black level.

6. FOCUS

Adjust the focus control for best overall definition and fine picture detail.



COMPONENT BOARD

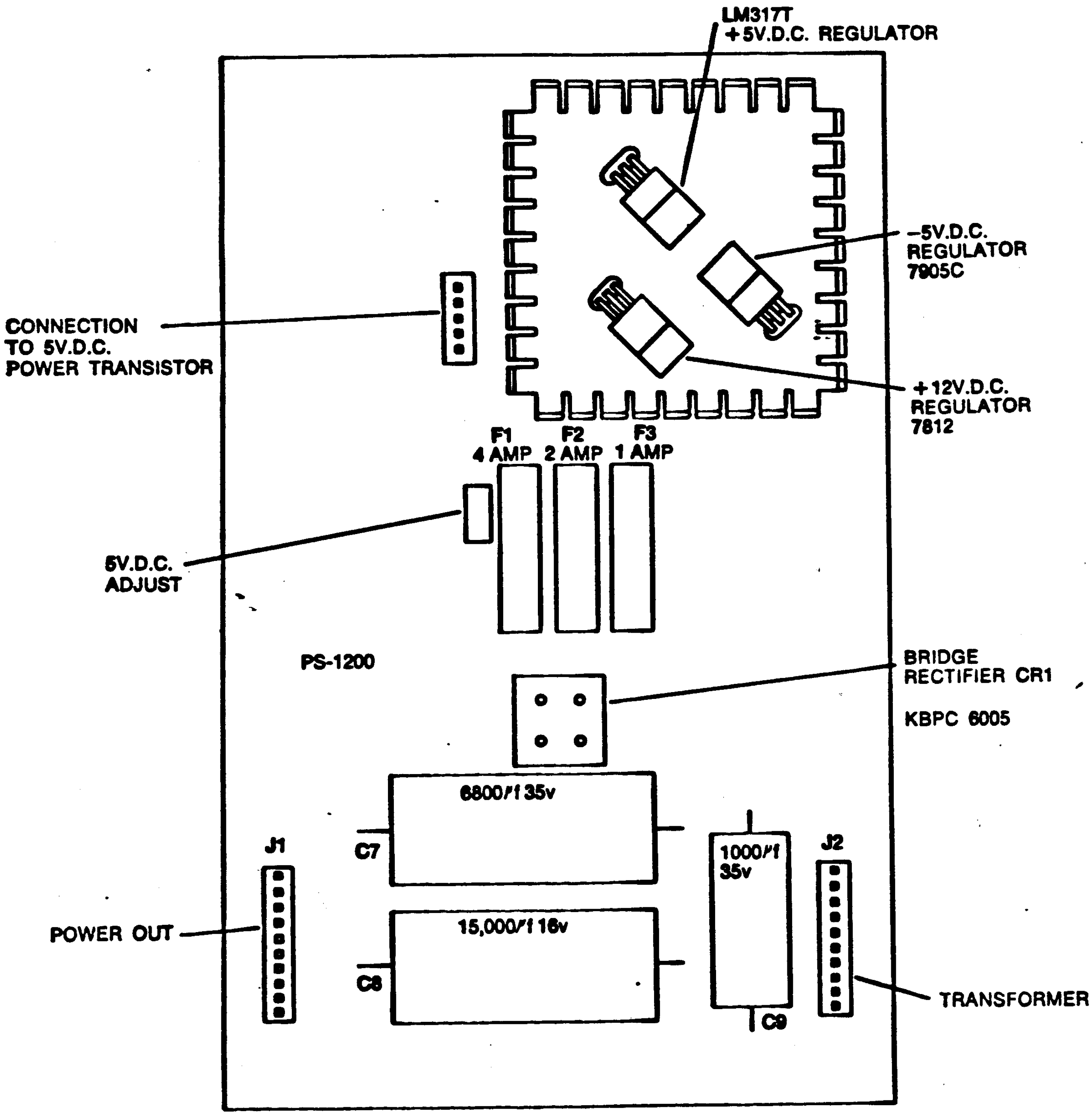
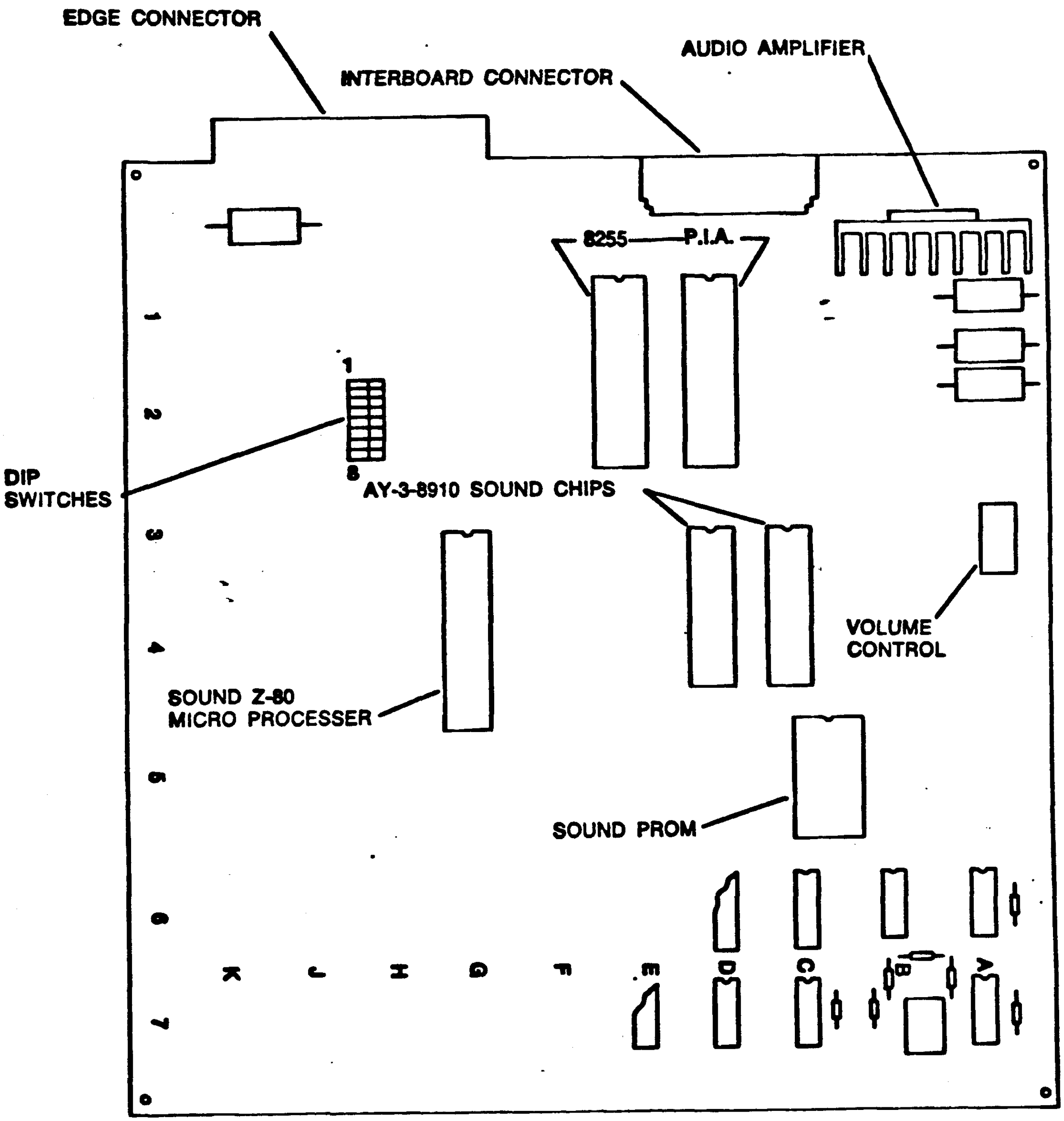


FIGURE 4. POWER SUPPLY BOARD PS-1200


EDGE CONNECTOR
INTERBOARD CONNECTOR
AUDIO AMPLIFIER
8255
P.I.A.
1
8
DIP
SWITCHES
AY-3-8910 SOUND CHIPS
VOLUME
CONTROL
SOUND Z-80
MICRO PROCESSER
SOUND PROM
1
2
3
4
5
6
7
K
J
H
G
F
E
D
C
B
A

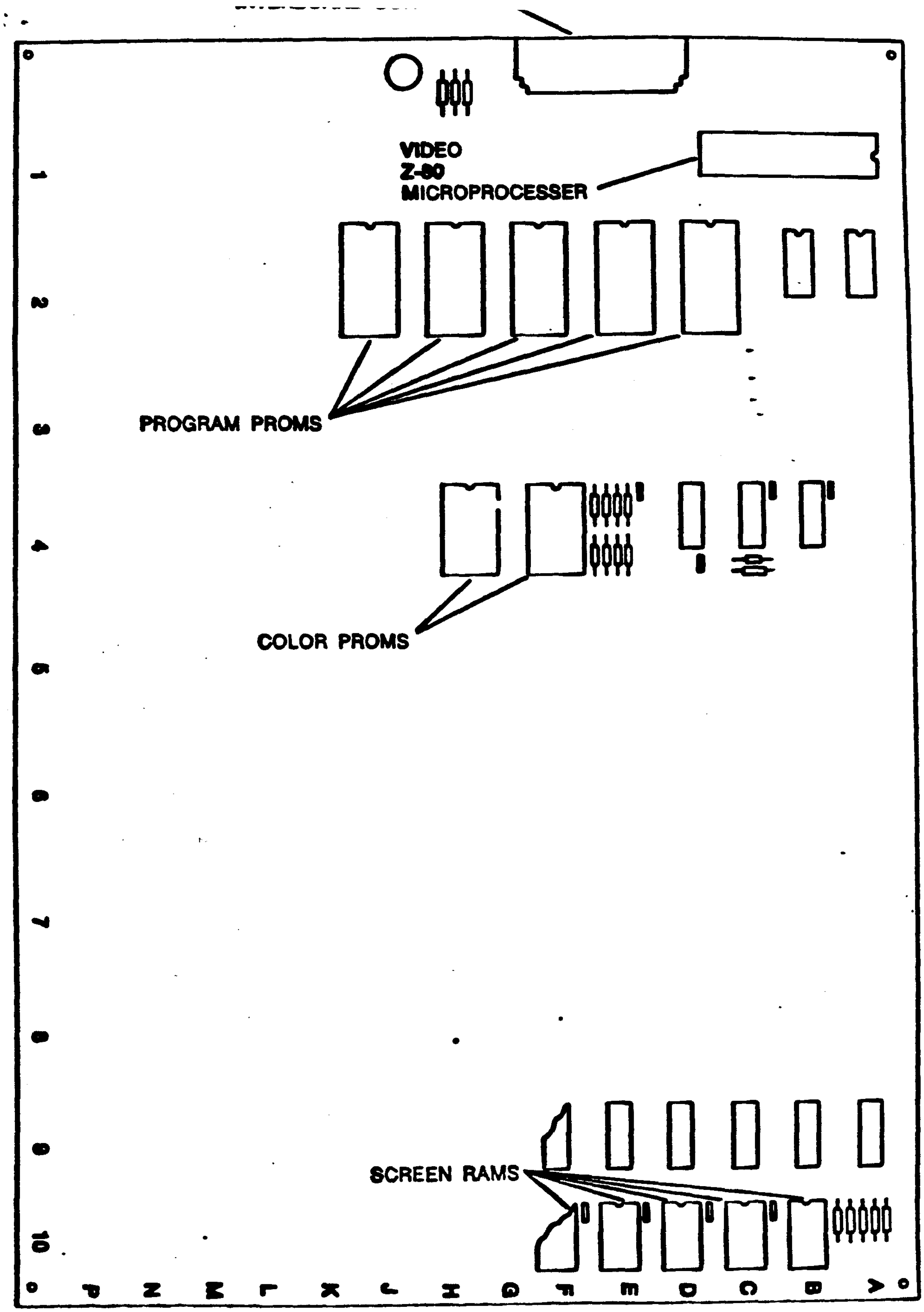
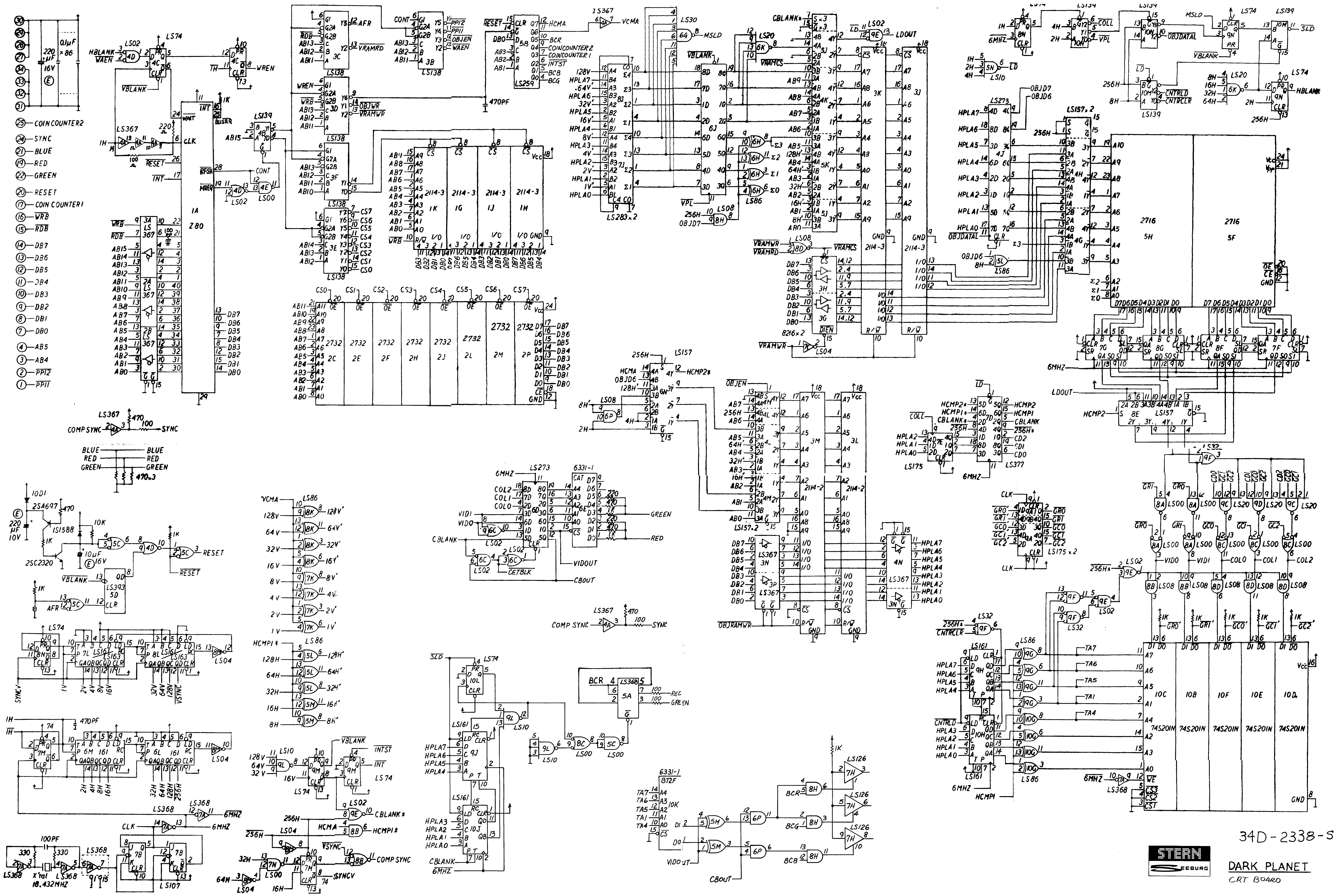
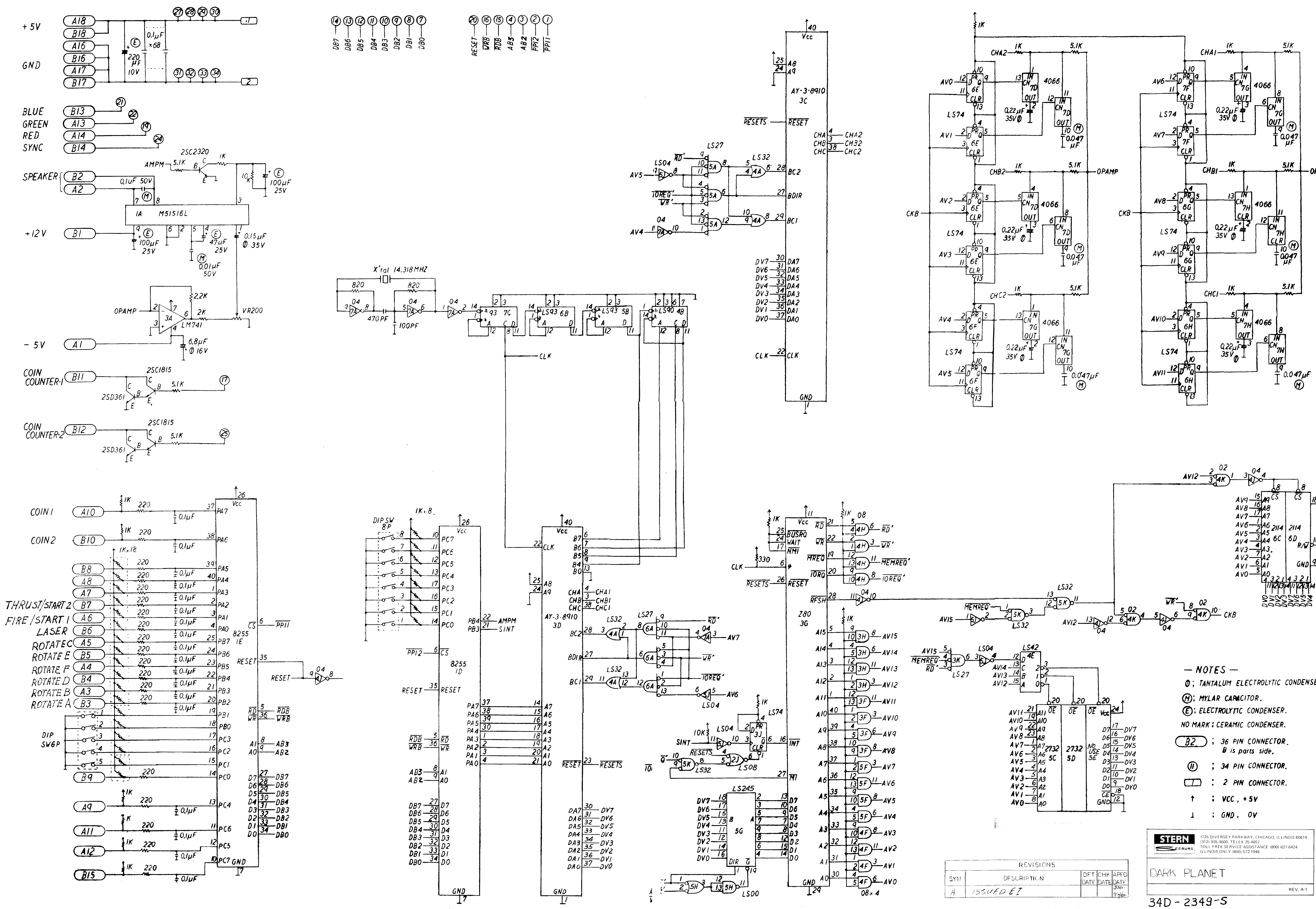


FIGURE 7. VIDEO BOARD


34D-2338-5
STERN
SEEBURG
DARK PLANET
CRT BOARD



— NOTES —
Ⓣ ; TANTALUM ELECTROLYTIC CONDENSER.
Ⓜ ; MYLAR CAPACITOR.
Ⓔ ; ELECTROLYTIC CONDENSER.
NO MARK ; CERAMIC CONDENSER.
B2 ; 36 PIN CONNECTOR. B is parts side.
⑪ ; 34 PIN CONNECTOR.
7 ; 2 PIN CONNECTOR.
↑ ; VCC , +5V
⊥ ; GND , 0V
REVISIONS
SYM DESCRIPTION DFT DATE CHK DATE APPD DATE
A ISSUED E.I
STERN
DARK PLANET
REV. A-1
34D-2349-S